



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,703	10/26/2001	Michael S. Foster	030048035US	5658
25096	7590	09/19/2005	EXAMINER	
PERKINS COIE LLP PATENT-SEA P.O. BOX 1247 SEATTLE, WA 98111-1247			KUO, ALEXANDER E	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/039,703	<b>Applicant(s)</b> FOSTER ET AL.	
	<b>Examiner</b> Alexander Kuo	<b>Art Unit</b> 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/19/2004</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on Feb. 25, 2002. These drawings are unacceptable.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: external network 125. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities:  
On page 14, paragraph 33, interconnect fabric modules 110 should reference 110a and interconnect fabric should reference 110  
On page 16, paragraph 35, decision block 304 should reference 305

Also note page 17 paragraph 36 includes numerous grammatical errors.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6-8, 10-17, and 18-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Chin.

- Consider claim 1, Chin has a switch receiving a frame (packet 300), where upon receiving the frame, it is determined whether the destination virtual address, or "PTID (350)," is reserved (or unknown), and if it is, determining whether another virtual address (306, 308) of the frame maps to a port of the switch. It is understood that, as broadly recited by the applicant, that the PTID serves as one destination virtual address, and that the pair of encapsulated addresses (306, 308), serve as another virtual address. The checking of whether another virtual address of the frame maps to a port of the switch is taught as a multi-tier process by Chin. Chin first does a full address comparison with a table stored in the CAM (column 3, line 24-25). Once the address comparison is done and a match found, the PTID is provided (column 3, line 29-30), from which through a mapping of PTID to port, the outbound port is identified (column 2, line 38-49). Inherently, Chin discloses that when the other virtual address of the frame maps to a port of the switch (matching result found in CAM), that the frame will be

Art Unit: 2667

transmitted via the mapped-to port. In conformance with the broad limitations recited by the applicant, each switch acts as an individual and distributed network manager. Chin further teaches that when the other virtual address does not map to a port of the switch, for the frame to be flooded to all ports (column 3, line 30-31), inherently transmitting the frame to the network manager.

- Regarding claim 2, the destination virtual address (PTID) is encapsulated into the original frame. As shown in Figure 3, both the destination virtual address (350) and the other virtual address (306, 308) are stored in the header of the frame.

- Regarding claim 3, the above analysis of Chin reference with respect to claim 1 is equally applied to this claim, with the further analysis that the frame is transmitted via a port based on a mapping of virtual addresses to port as shown in Figure 6C.

- Regarding claim 4, each port of the switch has its own mapping (column 2, line 40).

- Regarding claim 6, the mapped-to port transmits the frame via in-band communications (column 3, line 38).

- Regarding claim 7, Chin teaches that when a path is "learned," the use of out-of-band data path (column 3, line 36) is used to transfer information (the frame) back to the previous device, or switch, (Figure 6B), and to the CPU, located within the network manager. Inherently, the network manager transmits the frame via out-of-band communications.

- Regarding claim 8, referencing and combining the analysis of both claims 1 and 7, it is clear that Chin has a network manager that is distributed to devices

Art Unit: 2667

connected to switches and the network manager transmits the frame via an out-of-band communications to a device connected to the switch.

- Regarding claims 10-17, the above analysis of Chin reference with respect to claims 1-4 and 7-8 are also equally applied to these broader claims, where it is understood that a switch is also a router.

- Regarding claims 18-30, the above analysis of Chin reference with respect to claims 1-4, 7-8, and 10-17 are also equally applied to these apparatus claims.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin v. Rangachar.

- Consider claim 5, Chin includes a method in a routing device, or switch, for transmitting frames to another network manager through in-band communications (see the explanation in paragraph 5 above). Chin does not include the method where transmitting the frame via the mapped-to port transmits the frame to the network manager. Rangachar teaches how the use of a centralized network manager to perform many control and signaling functions normally performed by a switch provides for a more reliable network (column 3 & 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Chin a centralized

Art Unit: 2667

network manager as suggested by Rangachar in order to improve the network, where Chin's CAM would be located at the centralized network manager. Therefore, the initial transmission of the frame via the mapped-to port, which included the transmission of the frame to the CAM (as previously explained in reference to claim 1), inherently transmitted the frame to the network manager.

- Regarding claim 9, including Rangachar's centralized network manager obviously results in a network manager that is centralized where the frame is transmitted to the network manager via in-band communications.

### ***Conclusion***


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jacquet discloses a system for transmitting messages to switches utilizing frames with multiple addresses as well as the flexibility to base routing decision on various criteria. Crayford teaches a network management process that also has a second address encapsulated into the initial message that can be selectively routed to a network manager. Easki provides the use of a uniform VPI/VCI identifier, similar to the virtual destination address of the applicant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Kuo whose telephone number is (571) 272-5246. The examiner can normally be reached on Monday through Friday, 8:30 a.m. - 5:00 p.m..

Art Unit: 2667

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2667 9/16/05